

REMARKS

This responds to the Office Action dated December 29, 2004, and the references cited therewith. No claims were amended or cancelled. Thus, claims 1-43 and 45-59 remain pending in this application. Applicant respectfully traverses the rejections set forth in the Office Action dated December 29, 2004, on a number of grounds including, but not limited to the following, which are provided in the same order as the Office Action:

§102 Rejection of the Claims

Claim 11 was rejected under 35 USC § 102(e) as being anticipated by Sigwanz et al. (U.S. Patent No. 6,049,617, hereinafter "Sigwanz").

Applicant respectfully traverses the rejection of claim 11. Applicant submits that Sigwanz fails to provide, among other things, a smooth envelope that excludes apparent modulation of the digital audio signal, as recited in claim 11. For instance, Sigwanz discusses FIG. 3 starting at about col. 3, line 58 and compares curve 8 with curve 9. However, both curves include modulation. Thus, the apparatus of Sigwanz does not exclude apparent modulation and is therefore different than the apparatus recited in claim 11.

Additionally, the rejection fails to show how Sigwanz provides the recited detector, thus it is believed that a proper *prima facie* rejection is not set forth by the Office Action.

Applicant has addressed the rejection on its deficiencies, however, Applicant reserves the right to swear behind the cited references at a future date.

Claims 21-23, 28, 36 and 50 were rejected under 35 USC § 102(e) as being anticipated by Orban (U.S. Patent No. 6,205,225, hereinafter "Orban").

Claims 21-23

Applicant respectfully traverses the rejection of claim 21 on several grounds. The rejection of claim 21 discusses "thresholding means" and "summing means" which are not recited in claim 21. Thus, the rejection is unclear. Clarification is respectfully requested in a subsequent non-final communication to provide Applicant the ability to address the rejections of record, or withdrawal of such rejections is respectfully requested.

The rejection thereafter concludes with: “. . . which read a sampler, a detector, an adder and adjuster.” Clarification in the next official communication or withdrawal of these statements is also respectfully requested.

Furthermore, the rejections of record fail to address the recited subject matter concerning apparent modulation. Thus, it is respectfully submitted that the rejection fails to provide a proper *prima facie* case of anticipation.

It is respectfully submitted that Orban does not address the same problems nor does it anticipate the subject matter of claim 21. Orban's SUMMARY OF THE INVENTION states that “an object of the invention is to reduce audible modulation distortion caused by any audio compression, limiting, or gain control process by exploiting the frequency asymmetry of the psychoacoustic masking curves of the human ear.” The present subject matter is not directed to psychoacoustic masking curves of the human ear.

Thus, it is respectfully submitted that Orban fails to provide an anticipatory reference under 35 U.S.C. 102(e).

Applicant respectfully submits that the foregoing deficiencies of Orban relate to claims 22-23 which are dependent on claim 21.

Reconsideration and allowance of claims 21-23 are respectfully requested.

Claim 28

Applicant respectfully traverses the rejection of claim 28 on several grounds. The rejection of claim 28 discusses “means of sampling an input signal,” “thresholding means,” and “summing means” which are not recited in claim 28. Thus, the rejection is unclear. Clarification is respectfully requested in a subsequent non-final communication to provide Applicant the ability to address the rejections of record, or withdrawal of such rejections is respectfully requested.

The rejection thereafter concludes with: “. . . which read a sampler, a detector, an adder and adjuster.” Clarification in the next official communication or withdrawal of these statements is also respectfully requested.

Furthermore, the rejections of record fail to address the recited subject matter concerning apparent modulation. Thus, it is respectfully submitted that the rejection fails to provide a proper *prima facie* case of anticipation.

It is respectfully submitted that Orban does not address the same problems nor does it anticipate the subject matter of claim 28. Orban's SUMMARY OF THE INVENTION states that "an object of the invention is to reduce audible modulation distortion caused by any audio compression, limiting, or gain control process by exploiting the frequency asymmetry of the psychoacoustic masking curves of the human ear." The present subject matter is not directed to psychoacoustic masking curves of the human ear.

Thus, it is respectfully submitted that Orban fails to provide an anticipatory reference under 35 U.S.C. 102(e).

Reconsideration and allowance of claim 28 is respectfully requested.

Claim 36

Applicant respectfully traverses the rejection of claim 36 on several grounds. The rejection of claim 36 discusses "means of sampling an input signal," "thresholding means," and "summing means" which are not recited in claim 36. Thus, the rejection is unclear. Clarification is respectfully requested in a subsequent non-final communication to provide Applicant the ability to address the rejections of record; or withdrawal of such rejections is respectfully requested.

The rejection thereafter concludes with: "... which read a sampler, a detector, an adder and adjuster." Clarification in the next official communication or withdrawal of these statements is also respectfully requested.

Furthermore, the rejections of record fail to address the recited subject matter concerning apparent modulation. Thus, it is respectfully submitted that the rejection fails to provide a proper *prima facie* case of anticipation.

It is respectfully submitted that Orban does not address the same problems nor does it anticipate the subject matter of claim 36. Orban's SUMMARY OF THE INVENTION states that "an object of the invention is to reduce audible modulation distortion caused by any audio compression, limiting, or gain control process by exploiting the frequency asymmetry of the

psychoacoustic masking curves of the human ear.” The present subject matter is not directed to psychoacoustic masking curves of the human ear.

Thus, it is respectfully submitted that Orban fails to provide an anticipatory reference under 35 U.S.C. 102(e). Reconsideration and allowance of claim 36 is respectfully requested.

Claim 50

Applicant respectfully traverses the rejection of claim 50 on several grounds. The rejection of claim 50 discusses “thresholding means” and “summing means” which are not recited in claim 50. Thus, the rejection is unclear. Clarification is respectfully requested in a subsequent non-final communication to provide Applicant the ability to address the rejections of record, or withdrawal of such rejections is respectfully requested.

The rejection thereafter concludes with: “. . . which read a sampler, a detector, an adder and adjuster.” Clarification in the next official communication or withdrawal of these statements is also respectfully requested.

Furthermore, the rejections of record fail to address the recited subject matter concerning apparent modulation. Thus, it is respectfully submitted that the rejection fails to provide a proper *prima facie* case of anticipation.

It is respectfully submitted that Orban does not address the same problems nor does it anticipate the subject matter of claim 50. Orban’s SUMMARY OF THE INVENTION states that “an object of the invention is to reduce audible modulation distortion caused by any audio compression, limiting, or gain control process by exploiting the frequency asymmetry of the psychoacoustic masking curves of the human ear.” The present subject matter is not directed to psychoacoustic masking curves of the human ear.

Thus, it is respectfully submitted that Orban fails to provide an anticipatory reference under 35 U.S.C. 102(e).

Reconsideration and allowance of claim 50 is respectfully requested.

Express Reservation of Right To Swear Behind Reference

Applicant has addressed the rejections on their deficiencies, however, Applicant reserves the right to swear behind the cited references at a future date.

§103 Rejection of the Claims

Claims 1 and 6 were rejected under 35 USC § 103(a) as being unpatentable over Dibachi et al. (U.S. Patent No. 6,173,062, hereinafter "Dibachi") in view of Sigwanz.

Claim 1

Applicant respectfully traverses the obviousness rejection of claim 1 on several grounds. It is respectfully submitted that Sigwanz fails to provide, among other things, a digital processor including an inhibitor to inhibit distortions arising from apparent modulation of the input signal due to sampling of the input signal, as recited in claim 1. For instance, Sigwanz discusses FIG. 3 starting at about col. 3, line 58 and compares curve 8 with curve 9. However, both curves include modulation. Thus, it is believed that the apparatus of Sigwanz does not inhibit apparent modulation and is therefore different than the apparatus recited in claim 1.

Additionally, the rejection fails to show how Sigwanz provides the recited digital processor, thus it is believed that a proper *prima facie* obviousness rejection is not set forth by the Office Action.

Applicant also respectfully traverses that it would have been obvious for one of skill in the art to modify Dibachi as stated in the Office Action. It is respectfully submitted that Dibachi is related to shifting of a frequency range to among other things, an ultrasonic range (Abstract). Thus, Dibachi does not teach or suggest to one of skill in the art to combine Sigwanz, and the combination fails to provide the recited subject matter.

Applicant has addressed the rejection on its deficiencies, however, Applicant reserves the right to swear behind the cited references at a future date. Reconsideration and allowance of claim 1 is respectfully requested.

Claim 6

Applicant respectfully traverses the obviousness rejection of claim 6 on several grounds. It is respectfully submitted that Sigwanz fails to provide, among other things, smoothing an envelope of the input signal, wherein the smoothing inhibits distortions arising from apparent modulation of the input signal produced by sampling the input signal, as recited in claim 6. For

instance, Sigwanz discusses FIG. 3 starting at about col. 3, line 58 and compares curve 8 with curve 9. However, both curves include modulation. Thus, it is believed that the apparatus of Sigwanz does not inhibit distortions arising from apparent modulation of the input signal produced by the sampling signal and is therefore different than the subject matter recited in claim 6.

Applicant also respectfully traverses that it would have been obvious for one of skill in the art to modify Dibachi as stated in the Office Action. It is respectfully submitted that Dibachi is related to shifting of a frequency range to among other things, an ultrasonic range (Abstract). Thus, Dibachi does not teach or suggest to one of skill in the art to combine Sigwanz, and the combination fails to provide the recited subject matter.

Applicant has addressed the rejection on its deficiencies, however, Applicant reserves the right to swear behind the cited references at a future date. Reconsideration and allowance of claim 6 is respectfully requested.

Claims 12 and 13

Claims 12 and 13 were rejected under 35 USC § 103(a) as being unpatentable over Sigwanz in view of Holube et al. (U.S. Patent No. 6,198,830, hereinafter "Holube").

Applicant respectfully traverses the obviousness rejection of claims 12 and 13 on several grounds. It is respectfully submitted that Sigwanz fails to provide, among other things, a detector to form a smooth envelope that is a rectified version of the digital audio signal and wherein the smooth envelope excludes apparent modulation of the digital audio signal, as recited in claim 11, and thus also by dependent claims 12 and 13. For instance, Sigwanz discusses FIG. 3 starting at about col. 3, line 58 and compares curve 8 with curve 9. However, both curves include modulation. Thus, the apparatus of Sigwanz does not inhibit apparent modulation and is therefore different than the apparatus recited in claims 12 and 13.

Applicant also respectfully traverses that it would have been obvious for one of skill in the art to modify Holube as stated in the Office Action. It is respectfully submitted that Holube is related to feedback suppression (Title). Thus, Holube does not teach or suggest to one of skill in the art to combine Sigwanz, and the combination fails to provide the recited subject matter.

Applicant has addressed the rejection on its deficiencies, however, Applicant reserves the right to swear behind the cited references at a future date. Reconsideration and allowance of claims 12 and 13 are respectfully requested.

Claim 14

Claim 14 was rejected under 35 USC § 103(a) as being unpatentable over Sigwanz and Holube, further in view of Williamson et al. (U.S. Patent No. 5,091,952, hereinafter "Williamson").

Applicant respectfully repeats the discussion above pertaining to claims 11, 12 and 13 in traversing the obviousness rejection of claim 14, which depends on claim 13. Applicant respectfully traverses the assertion that it would have been obvious to one of ordinary skill to modify Sigwanz and Holube by use of Williamson. The discussion above is repeated to support this traversal.

Reconsideration and allowance of claim 14 are respectfully requested.

Claim 16

Claim 16 was rejected under 35 USC § 103(a) as being unpatentable over Dibachi and Sigwanz in view of Holube.

Applicant respectfully traverses the obviousness rejection of claim 16 on several grounds. It is respectfully submitted that Sigwanz fails to provide, among other things, an adjuster to adjust the gain of the preamplifier if the smooth envelope is greater than a threshold to reduce distortions due to apparent modulation arising from sampling of the amplified input signal, as recited in claim 16. For instance, Sigwanz discusses FIG. 3 starting at about col. 3, line 58 and compares curve 8 with curve 9. However, both curves include modulation. Thus, the apparatus of Sigwanz does not provide an adjuster as recited and is therefore different than the apparatus recited in claim 16.

Additionally, the rejection fails to show how Sigwanz provides the recited adjuster, thus it is believed that a proper *prima facie* obviousness rejection is not set forth by the Office Action.

Applicant also respectfully traverses that it would have been obvious for one of skill in the art to combine Dibachi, Sigwanz, and Holube as stated in the Office Action. It is respectfully

submitted that Dibachi is related to shifting of a frequency range to among other things, an ultrasonic range (Abstract). Thus, Dibachi does not teach or suggest to one of skill in the art to combine Sigwanz and/or Holube, and the combination fails to provide the recited subject matter.

Applicant has addressed the rejection on its deficiencies, however, Applicant reserves the right to swear behind the cited references at a future date. Reconsideration and allowance of claim 16 are respectfully requested.

Claim 17

Claim 17 was rejected under 35 USC § 103(a) as being unpatentable over Dibachi and Sigwanz and Holube in view of Williamson.

The rejection is respectfully traversed at least for the reasons set forth regarding claim 16. The assertion that one skilled in the art would combine such references is likewise traversed.

Reconsideration and allowance of claim 17 are respectfully requested.

Claim 43

Claim 43 was rejected under 35 USC § 103(a) as being unpatentable over Orban (U.S. Patent No. 6,205,225).

Applicant respectfully traverses the rejection of claim 43 on several grounds. The rejection of claim 43 discusses “means of sampling,” “thresholding means,” and “summing means” which are not recited in claim 43. Thus, the rejection is unclear. Clarification is respectfully requested in a subsequent non-final communication to provide Applicant the ability to address the rejections of record, or withdrawal of such rejections is respectfully requested.

The rejection thereafter concludes with: “. . . which read a filter, a sampler, a detector, an adder and adjuster.” Clarification in the next official communication or withdrawal of these statements is also respectfully requested.

Furthermore, the rejections of record fail to address the recited subject matter concerning apparent modulation. Thus, it is respectfully submitted that the rejection fails to provide a proper *prima facie* case of anticipation.

It is respectfully submitted that Orban does not address the same problems nor does it render obvious the subject matter of claim 43. Orban’s SUMMARY OF THE INVENTION

states that “an object of the invention is to reduce audible modulation distortion caused by any audio compression, limiting, or gain control process by exploiting the frequency asymmetry of the psychoacoustic masking curves of the human ear.” The present subject matter is not directed to psychoacoustic masking curves of the human ear.

Applicant also traverses the assertion that it would have been obvious to modify Orban to provide the recited subject matter. The resulting apparatus is not provided by Orban whether IIR filters in a Hilbert configuration were well known or not. Thus, it is respectfully submitted that Orban fails to provide an adequate obviousness reference under 35 U.S.C. 103.

Reconsideration and allowance of claim 43 is respectfully requested.

Express Reservation of Right To Swear Behind Reference

Applicant has addressed the rejections on their deficiencies, however, Applicant reserves the right to swear behind all of the cited references at a future date.

Allowable Subject Matter

Claims 2-5, 7-10, 15, 18-20, 24-27, 29-35, 37-42, 45-49, 51-59 were indicated to be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claim. Applicant notes the allowability of the recited subject matter and has provided the foregoing discussion to show that the independent claims are also patentable.

CONCLUSION

Applicant respectfully submits that the claims are in condition for allowance, and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney at (612) 373-6912 to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

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By their Representatives,


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CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: Mail Stop Amendment, Commissioner of Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this 31st day of May, 2005.

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Signature